

XVIII. *Notes on insects apparently of the genus Margarodes, Lausd.-Guilding, stated to occur abundantly in the nests of White Ants, and also of true Ants, in certain Western Districts of the Cape Colony.*
By ROLAND TRIMEN, F.R.S., F.L.S.

[Read October 6th, 1886.]

EARLY in the current year I received, from Mr. G. G. Rainier, the Civil Commissioner of the Tulbagh District, a number of small seed-like objects with a partly coppery, partly pearly, surface-lustre, which he wrote were found in great abundance under the base of the mounds roofing the nests of the White Ants (*Termites*) in the mountainous parts of his district. These objects, he stated, were strung on chains for sale by the residents, their varying shades from yellowish pearly through golden to coppery, making them rather effective ornaments.

At my request—as the specimens first received were all empty and presenting a large hole on one side—Mr. Rainier obtained some fresh examples, which were without holes, and all of the yellowish pearly or very pale golden tint. On opening a few of these there could be no doubt that they were insect-pupæ, the interior being full of the cream-like juices so characteristic of newly-formed chrysalids. I set these fresh examples, with the cemented material from the White Ants' nest which accompanied them, and in which many of them were embedded, carefully aside in a separate receptacle, and watched daily for the disclosure of some perfect insect from them; but up to the date (May 26th) of my leaving the Cape no such insect made its appearance. My impression, which was shared by my assistant, Mr. L. Péringuey, was that these insects belonged to some hymenopterous or dipterous parasite, and I suggested to my correspondent that this might be the case.

I brought the later-received examples to England, and after my arrival received from the Rev. G. U. R. Fisk, who had left the Cape soon after myself, the

further set of specimens which I now exhibit, *viz.*, the pearl-like pupæ (some free and others embedded in the material of the ants' nest), specimens of the chains made by stringing them together, and also some true Ants, stated by Mr. Fisk's correspondent to have been found in the same nest.

Quite recently, on visiting the Zoological Department of the British Museum of Natural History, I was shown, by Mr. Waterhouse and Mr. Kirby, a chain of these creatures, which had been sent from the Cape to Sir J. Lubbock, and forwarded by him to the Museum. I was also shown specimens of Guilding's *Margarodes formicarum* pupæ from the West Indies, with which in general structure and appearance the Cape examples presented much agreement, but were obviously much larger and of brighter tints. The British Museum collection also contains specimens of a similar species (even smaller than the West Indian one) from North Australia.

Thanks to a reference kindly furnished by Mr. Kirby, I was able to consult Lansdowne-Guilding's original account of his "ground pearl" (*Margarodes formicarum*), read to the Linnean Society as long ago as 1827, and published in vol. xvi. of the 'Transactions,' pp. 115—119. That well-known naturalist records that in the Bahamas the insects occurred plentifully, and under the name of "ant-eggs" were strung into necklaces and ornamental purses. In Union Island Mr. Guilding collected a box-full, kept them in the moist marly soil in which they were found, and soon observed insects issuing from them. The spots of soil whence he took the specimens were about stones, under which Ants had established their nests, and he suggests that the insects were parasitic on the larvæ of the Ants. Guilding's figures of the insect produced from the "pearls" have much of the appearance of a *Coccus*, except that the fore legs are shown as very strongly recurved and evidently raptorial. According to the author's account *Margarodes* has no mouth, and it occurs to him as not unlikely that it obtains nutriment by suction through a foramen in each anterior claw. He hesitates to assign the insect to any known order, but Burmeister (*Handb. der Ent.*, ii., p. 79), and Westwood (*Introd. M. Class. Ins.*, ii., p. 449), agree in placing it among the *Coccide*. Burmeister,

indeed, without hesitation places *Margarodes* in the genus *Porphyrophora*, Brendt, with the well-known forms *P. Polonica* and *P. Armeniaca*; but this location would appear to be of very doubtful propriety, if Guilding's figures and description of the perfect insect have any claim to accuracy.

As regards the insects living with either Ants or the so-called "White Ants," it is quite clear that Guilding refers to the former, and I have so often noticed the nests of true Ants about the bases of those of the *Termites* that I think it by no means improbable that the Cape "ground pearls" are actually denizens of the Ants' nests, although associated with those of the *Termites*, and perhaps are parasites of the very Ant sent by Mr. Fisk's correspondent.

I trust, on my return to the Cape, to be able, either personally or through a correspondent living in the locality, to rear the insect of the "ground pearl," and to ascertain whether or not it presents the characters noted by Guilding in his account of the West Indian species.

